

Preliminary Amendment

Clinton WALLER Jr. et al.

Serial No.: 08/892,902

Filed: 14 July 1997

For: MICROPOROUS INKJET RECEPTORS CONTAINING BOTH A PIGMENT MANAGEMENT SYSTEM & A FLUID MANAGEMENT SYSTEM

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36. (Amended) An inkjet receptor medium comprising:

a hydrophilic porous membrane of a synthetic polymer having a pigment management system in contact with surfaces of pores of the substrate, wherein the pigment management system comprises an inorganic multivalent metal salt coating along the surfaces of the porous substrate.

Remarks

Claims 4 and 15 having been canceled, claims 1, 16, 18, 19, and 22 having been amended, and claims 25-36 having been added, the pending claims in the above-identified patent application are claims 1, 5, 10-16, 18-19, and 21-36. Reconsideration and withdrawal of the rejections of the claims in light of the preceding amendments and following remarks are respectfully requested.

The new and amended claims are supported by the originally filed application, including the claims. For example, support for the language in claim 22 regarding the porous (or microporous) membrane (including film) of a synthetic polymer would be clear to one of skill in the art upon reading page 10, line 12 through page 12, line 8, for example. Support for new claim 36 regarding a hydrophilic porous membrane is supported by the specification at page 12, lines 25-26.

The changes to the specification have been made to correct typographical errors. No new matter has been added.

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The Rejection under 35 U.S.C. §112, first paragraph

Claim 23 was rejected under 35 U.S.C. §112, first paragraph. The Office Action alleges that the specification does not reasonably provide enablement for "fluorinated particulates." Although Applicants' do not agree with the Examiner, claim 23 has been amended to recite "fluorinated silica agglomerates" in an effort to expedite prosecution. Withdrawal of the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

The Rejections under 35 U.S.C. §112, second paragraph

Claims 4, 5, 15, 18, 19, and 23 were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Each of these claims having been cancelled or amended (either directly or indirectly), this rejection is rendered moot. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

The Rejection under 35 U.S.C. 102(b) and 103(a)

Claims 1, 4, 5, 15, 16, 18, 22, and 23 were rejected under 35 U.S.C. 102(b) as alleged anticipated by Cousin et al. (U.S. Patent No. 4,554,181). Claims 10-14, 18, and 21 were rejected under 35 U.S.C. 103(a) as allegedly obvious in view of Cousin et al. (U.S. Pat. 4,554,181). Independent claims 1, 16, and 18 having been amended to remove the language regarding the functionalized coating, this rejection is rendered moot. Insofar as the rejection may apply to the presently pending claims and new claims 25-36, these rejections are respectfully traversed.

Cousin et al. relate to an ink jet recoding sheet having a bi-component cationic recording surface. The ink jet recording sheet includes a combination of a water soluble polyvalent metal salt and a cationic polymer wherein the polymer contains cationic groups which are available for ionically interacting with an anionic dye and insolubilizing it (column 2, lines 39-44). The metal salt is typically a water soluble salt of polyvalent cations from Group II, Group III, or the Transition Metals of the Periodic Table of elements (column 5, lines 46-49).



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In contrast to Cousin et al., independent claim 1 is directed to an inkjet receptor medium having a porous substrate containing a fluid management system and a pigment management system in contact with surfaces of pores of the substrate wherein the pigment management system contains functionalized particulates within the pores of the porous substrate or a functionalized coating along the surfaces of the pores of the porous substrate, and wherein the fluid management system contains a surfactant that carries away an ink passing through the substrate except for pigment particles in the ink. Claims 16 and 18 are directed to a method of making and using an inkjet receptor medium, respectively, employing an inkjet receptor medium as described above.

Although Cousin et al. include a porous substrate, such as paper, there is no teaching or suggestion of an inkjet receptor medium that includes: a porous membrane of a synthetic polymer; and a pigment management system that includes an inorganic multivalent metal salt coating impregnated into pores of the porous membrane. Furthermore, there is no recognition of the benefits provided by the use of an inorganic multivalent metal salt coating. Significantly, there is no teaching or suggestion in Cousins et al. of the advantages these combinations provide to an inkjet receptor medium that has a porous membrane of a synthetic polymer as a substrate. Specifically, there is no recognition that this compound, when impregnated into the pores of such substrate, provides the following advantages: (1) the pores remain open, thereby providing the advantages of a porous substrate; and (2) pigmented inks are prevented from penetrating too far into the porous membrane. Accordingly, withdrawal of the rejection under 35 U.S.C. '103(a), is respectfully requested.

Summary

It is respectfully submitted that each of the pending claims 1, 4-5, 10-16, 18-19, and 21-24 is in condition for allowance, and notification to that effect is respectfully requested. The

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Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

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